

AMENDMENTS TO THE CLAIMS

Listing of the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

1-22. (Cancelled)

23. (Previously Presented) A method of forming a coplanar electrochemical cell, the method comprising:

- (a) applying a layer of positive pole onto a first substrate;
- (b) applying a layer of negative pole onto the first substrate in spaced relation and in the same plane as the positive pole;
- (c) applying a layer of first electrolyte on and between the layers of spaced apart negative pole and positive pole, wherein the first electrolyte comprises at least one self-forming separator layer ingredient;
- (d) applying a layer of second electrolyte on a second substrate, wherein the second electrolyte comprises at least one self-forming separator layer ingredient; and
- (e) contacting the first substrate and the second substrate readily facilitating interaction between the at least one self-forming separator layer ingredient in the first substrate and second substrate layers to self-form an interfacial separator layer.

24. (Previously Presented) The method of claim 23, wherein said applying is done by a technique selected from the group consisting of printing, spraying, coating and dispensing and a combination thereof.

25. (Previously Presented) The method of claim 23, further comprising applying positive and negative current conductors.

26. (Previously Presented) The method of claim 23, further comprising applying a sealing ingredient onto at least one of the first and second substrates.

27. (Previously Presented) A method of forming an electrochemical cell, the method comprising contacting a first substrate with a second substrate, wherein the first substrate comprises (a) a negative pole and a positive pole in spaced relation and in the same plane as each other; and (b) a first electrolyte; and wherein the second substrate comprises a second electrolyte and wherein contacting the first substrate with the second substrate facilitates components in an electrolyte solution in the first substrate and components in an electrolyte solution in the second substrate to interact and/or react with each other and self-form an interfacial separator layer.

28. (Currently Amended) A coplanar electrochemical cell comprising
(a) a layer of positive pole and negative pole in spaced apart relation in the same plane;
(b) at least one electrolyte disposed on the layer of positive pole and negative pole and between the negative pole and the positive pole; and
(c) a self-formed separator, self-formed in situ, wherein there is no separately added separator.

29. (Previously Presented) The coplanar electrochemical cell of claim 28, further comprising a first substrate and a second substrate.

30. (Cancelled)

31. (Cancelled)

32. (Previously Presented) The coplanar electrochemical cell of claim 29, wherein the at least one electrolyte comprises a first electrolyte disposed on the first substrate and a second electrolyte disposed on the second substrate.

33. (Previously Presented) The coplanar electrochemical cell of claim 32, wherein the first electrolyte comprises a first self-formed separator ingredient, and the second electrolyte comprises a second self-formed separator ingredient, and wherein contact between the first and second substrates facilitates reaction and/or interaction between the first self-formed separator

ingredient in the first electrolyte and the second self-formed separator ingredient in the second electrolyte to form the self-formed separator.

34. (Previously Presented) An electrochemical cell comprising:

a negative pole and a positive pole spaced apart and disposed in the same plane;
an electrolyte layer comprising a first electrolyte solution and a second electrolyte solution; and

an integral and in-situ formed interfacial separator layer interposed on and between the negative pole and the positive pole within the electrolyte layer,

wherein said integral and in-situ formed interfacial separator layer comprises a product of interaction and/or reaction of components in the first electrolyte solution disposed on and between the negative pole and the positive pole and components in the second electrolyte solution, and

wherein there is no separately added separator.

35. (Previously Presented) The coplanar electrochemical cell of claim 28, wherein the self-formed separator is a gel or polymer precipitate.

36. (Previously Presented) The coplanar electrochemical cell of claim 33, wherein the first self-formed separator ingredient is a polymer solution and the second self-formed separator ingredient is a polymer precipitating agent.

37. (Previously Presented) The coplanar electrochemical cell of claim 33, wherein the first self-formed separator ingredient is a polymer solution and the second self-formed separator ingredient is an electrostatic cross-linking agent.

38. (Previously Presented) The coplanar electrochemical cell of claim 33, wherein the first self-formed separator ingredient is a first polymer solution and the second self-formed separator ingredient is a second polymer solution.

39. (Previously Presented) The coplanar electrochemical cell of claim 33, wherein the first self-formed separator ingredient is a polymerizable unit and the second self-formed separator ingredient is a polymerization activator.

40. (Previously Presented) The coplanar electrochemical cell of claim 33, wherein the second electrolyte is disposed on the first electrolyte.

41. (Previously Presented) The coplanar electrochemical cell of claim 33, wherein the self-formed separator forms between the first electrolyte and the second electrolyte.